

REMARKS

Claims 1, 9, 14 and 17 have been amended. Claims 2, 5, 10, 11 and 16 have been canceled. Claim 4 and 18 were previously canceled. Claims 1, 3, 6-9, 12-15, 17 and 19-21 are currently pending in this application. Applicants reserve the right to pursue the original and other claims in this and other applications. Applicants respectfully request reconsideration in light of the above amendments and the following remarks.

Applicants gratefully acknowledge the allowance of claim 20 and the indication of allowable subject matter in claim 8.

Claims 1, 3, 5-7 and 21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Cosmescu (U.S. Patent No. 6,149,648) ("Cosmescu"). This rejection is respectfully traversed and reconsideration is respectfully requested.

Claim 1 has been amended to incorporate the subject matter of previously presented claims 2, 5 and 16. As admitted by the Office Action, "Cosmescu fails to disclose that the guiding device is comprised of an electrically insulating material," which is now recited in claim 1. Office Action, pg. 4. Accordingly, claim 1 is not anticipated by Cosmescu. Claims 3, 6, 7 and 21 depend from claim 1 and are allowable along with claim 1. Applicants respectfully request the rejection be withdrawn and the claims allowed.

Claims 2, 9-17 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cosmescu in view of LaFontaine et al. (U.S. Patent No. 5,902,328) ("LaFontaine"). This rejection is respectfully traversed and reconsideration is respectfully requested.

As noted above, claim 1 has been amended to incorporate the subject matter of previously presented claims 2, 5 and 16. Claim 1 now recites an "apparatus for coagulating tissue" including an "electrode adapted to produce a high-frequency current," a "gas-delivering device having an outlet and being adapted to deliver an inert gas from said outlet into a space defined between said electrode and said tissue, such that a plasma is produced between said electrode and said tissue when said high-frequency current is applied to said inert gas, wherein a distal end of said

electrode projects out of said gas-delivering device” and a “guiding device comprised of an electrically insulating material and disposed at said distal end of said electrode, said guiding device for directing and guiding said plasma such that at least a part of said ~~gas~~ and plasma is diverted in a predetermined direction.” The “guiding device is configured such that said plasma flows into said space substantially radially with respect to said outlet of said gas-delivering device” and the “electrode is configured such that it may be retracted and pushed forward with respect to the gas-delivering device.”

Claim 9 has been amended to incorporate the subject matter of previously presented claims 10, 11 and 16. Claim 9 now recites an “apparatus for argon-plasma coagulating tissue” including a “gas-delivering device,” an “electrode disposed substantially coaxially with the gas-delivering device and configured to generate a high-frequency current, wherein a distal end of the electrode projects outward through an outlet of the gas-delivering device” and a “guiding device disposed at the distal end of the electrode, wherein the guiding device is configured for guiding a plasma stream flowing through the gas-delivering device, the plasma stream being produced when said high-frequency current is applied to an inert gas delivered by the gas-delivering device.” The “guiding device is comprised of a material that is electrically insulating and thermally stable” and “is disposed in an axially symmetric manner around the distal end of the electrode and configured such that the plasma stream is guided into a surrounding space substantially radially with respect to the outlet of the gas delivering device” and the “electrode is configured such that it may be retracted and pushed forward with respect to the gas-delivering device.”

Applicants respectfully submit that, even if combined, the cited combination of references does not disclose all features of the claims. Each of claims 1 and 9 requires that a plasma is diverted by a guiding device in a predetermined direction. The Office Action states that “the structure and functional limitations of claim 1 are met by the embodiment [of figure 8 of Cosmescu].... if the smoke evacuator were attached to a source of inert gas instead of a source of suction, the device would be capable of functioning as claimed.” Office Action, pg. 10. Applicants respectfully disagree and submit that the requirement of a plasma being diverted by the guiding device does, in fact, imply a structural difference that distinguishes the claimed invention from

Cosmescu. Figures 8A to 8G of Cosmescu “show adaptations of the invention for use with an ESU-pencil apparatus.” Cosmescu, col. 11, lines 21-22. The device of Cosmescu is an electrode for high-frequency coagulation wherein the current is *directly applied* to the tissue and the device is not one for argon plasma coagulation, as claimed. In the claimed device, the diverted plasma is generated by a high-frequency current *near* the application site. It is not possible to simply attach a plasma source to the chute 420 of Figure 8A of Cosmescu to arrive at the claimed invention. In particular, the chute 420 of the smoke evacuator would not be capable of guiding plasma. Thus, Cosmescu does not disclose, or suggest, a guiding device for diverting plasma in a predetermined direction, as required in claims 1 and 9.

Cosmescu also fails to disclose, or suggest, a guiding device configured such that plasma is guided into a surrounding space “substantially radially with respect to the outlet of the gas-delivering device,” as recited in each of claims 1 and 9. Contrary to the Office Action’s assertions, the electrode 112 of Cosmescu cannot disclose the claimed guiding device to divert plasma flow. As discussed in detail in Applicants’ previous response, the electrode 112 of Cosmescu is shaped more as a blade than as a sphere. In response, the Office Action states that “any enlarged portion (cross-shaped, spatula-shaped, etc) as a guiding device which due to its enlarged cross-section in at least one direction, would be capable of directing gas flowed over it in a predetermined direction.” Office Action, pg. 11. However, Applicants respectfully submit that an enlarged cross-section in only one direction (as disclosed in Cosmescu) would not be capable of guiding plasma into a surrounding space *substantially radially* with respect to the outlet of the gas-delivering device, as claimed.

Additionally, as admitted in the Office Action, “Cosmescu fails to disclose that the guiding device is comprised of an electrically insulating material.” Office Action, pg. 4. The Examiner relies on LaFontaine as disclosing this feature. Applicants respectfully submit that the cited references are not combinable in the manner asserted by the Examiner. The electrodes discussed in Cosmescu are intended for applying a high-frequency current directly to the tissue contacting the electrode. One of skill in the art would not be motivated to provide an electrically insulating part on these electrodes, since this portion of the electrode serves important functions,

such as cutting (see, e.g., Cosmescu, col. 10, lines 61-67 (element 436 is a "blade tip")) and would not properly function for its intended purpose if formed of an electrically insulating material.


Further, LaFontaine discloses a device for treating a human heart with RF energy. LaFontaine, col. 1, lines 11-17. It is an objective of LaFontaine "to provide a novel energy treatment device which is easier to maintain in operative, treating contact with tissues to be treated." LaFontaine, col. 4, lines 14-16. To maintain the contact between a distal electrode and the tissue, LaFontaine suggests using a liquid stream, in particular an electrolyte fluid. LaFontaine, col. 4, lines 28-38. The fluid passes the electrode and closes a circuit between the electrode and the tissue to be treated. See, e.g., LaFontaine, col. 10, lines 53-57. LaFontaine does not relate to using high-frequency current, as in Cosmescu, or to argon plasma coagulation, as claimed. Accordingly, one skilled in the art would not have been motivated to combine these disparate technologies in order to arrive at the claimed invention.

In view of the above, Applicants respectfully submit that claims 1 and 9, along with dependent claims 2, 12-15, 17 and 19, are allowable over the cited combination. Applicants respectfully request the rejection be withdrawn and the claims allowed.

In view of the above, Applicants believe the pending application is in condition for allowance.

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Respectfully submitted,

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